

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. APPLN. NO.: 09/422,347
ATTORNEY DOCKET NO. Q56325

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (*Currently Amended*) A device for compressing a list of final destination addresses for a multicast message, wherein each destination address in said list represents a different destination host, said device comprising:

means for detecting a common prefix in at least two different destination addresses from said list of destination addresses,

means for generating a suffix list for destination addresses from said list of destination addresses that are detected to have a common prefix, wherein said suffix list represents the non-identical portions of said detected destination addresses, and

means for adding said suffix list to said common prefix to thereby create a compound destination address consisting of compressed final destination addresses.

2. (*Previously Presented*) The device for compressing according to claim 1, wherein said list of destination addresses comprises Internet Protocol addresses.

3. (*Previously Presented*) The device for compressing according to claim 1, wherein said list of destination addresses comprises Internet Protocol addresses and other compound destination addresses.

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4. (*Currently Amended*) The device for compressing according to claim 1, wherein said list of destination addresses comprises ~~other~~ compound destination addresses.

5. (*Previously Presented*) The device for compressing according to claim 1, wherein said device is incorporated in a host of a communications network having connectionless multicast transmission capabilities.

6. (*Previously Presented*) The device for compressing according to claim 1, wherein said device is incorporated in a router of a communications network having connectionless multicast forwarding capabilities.

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7. (*Currently Amended*) A method for compressing a list of final destination addresses for a multicast message, wherein each destination address in said list represents a different destination host, said method comprises:

detecting a common prefix in at least two different destination addresses from said list of destination addresses,

generating a suffix list for destination addresses from said list of destination addresses that are detected to have a common prefix, wherein said suffix list represents the non-identical portions of said detected destination addresses, and

adding said suffix list to said common prefix to create a compound destination address consisting of compressed final destination addresses.

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8. (*Currently Amended*) A router of a communications network having connectionless multicast forwarding capabilities, wherein said router incorporates a device for compressing the a list of destination addresses of a multicast message as defined by claim 1.

9. (*Previously Presented*) A router according to claim 8, wherein said router further comprises:

a routing table memory, and

means to address said routing table memory via a compound address having the same format as said compound destination address.

10. (*Currently Amended*) A host of a communications network having connectionless multicast transmission capabilities, wherein said host incorporates the a device for compressing a list of destination addresses of a multicast message as defined by claim 1.

11. (*Previously Presented*) The device for compressing according to claim 1, wherein said means for detecting a common prefix detects octet-aligned prefixes.

12. (*Previously Presented*) The device for compressing according to claim 1, wherein said means for detecting a common prefix detects nibble-aligned prefixes.

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13. (*Previously Presented*) The device for compressing according to claim 1, wherein
said means for detecting a common prefix detects bit-aligned prefixes.

14. (*Previously Presented*) The method for compressing according to claim 7, wherein
detecting a common prefix further comprises detecting octet-aligned prefixes.

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15. (*Previously Presented*) The method for compressing according to claim 7, wherein
detecting a common prefix further comprises detecting nibble-aligned prefixes.

16. (*Previously Presented*) The method for compressing according to claim 7, wherein
detecting a common prefix further comprises detecting bit-aligned prefixes.